



World Wide Web Style Guidance

Guidance for publishing documents
on CIO Web sites



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Introduction

Technology should be used to help government serve people. The Internet is a significant tool in that respect - it is a worldwide telecommunications “network of networks” that can allow citizens and business to access information, and receive goods and services in ways that are better, cheaper, and faster.

The Office of the Chief Information Officer (OCIO) should use the Internet to help carry out its program missions. The Internet can facilitate communication and disseminate knowledge; encourage collaborative projects, resource sharing, and service provision; aid technological transfer; foster innovations; and build a broader infrastructure to support the performance of professional, work-related activities.

Purpose

The purpose of this document is to provide information on best practices for web publishing and establish specific guidance regarding design elements for the web presence of the OCIO.

The OCIO’s presence on the Internet must be professional, comprehensive and coordinated. The stewardship of the OCIO’s presence on the Internet rests with the individual organizations. It is each organization’s responsibility to contribute to a professional, appropriate, and coordinated presence for the OCIO on the Internet, as well as the Department of Energy (DOE). Toward this end, each CIO organization home page needs to be formatted to present information clearly, in a way most useful to customers, information should be linked logically and simply, and consistent with the current design. It should also be clear to any visitor to the CIO web site that they are in a Department of Energy, Office of the CIO Home page. With the establishment of the Americans With Disabilities Act of 1998, it is also important that anyone, regardless of their limitations, be able to utilize the CIO web site. More information can be located at http://cio.doe.gov/section_508/.

The Internet can be used to facilitate cost-effective and efficient business. This means that the Internet should be seen as a tool, a catalyst for streamlining business practices, completing transactions without paper, reducing the number of forms and incoming calls, answering commonly asked questions, etc. In accordance with accepted practice, organizations should seek to link with other Internet sites such as other DOE programs offices and government agencies to best serve their customers. Links should not be provided to private businesses, unless a formal business partnership has been approved; and/or unless the reason for the link is primarily educational in nature.

Core issues, when designing a web site include: the needs of customers in determining what information to provide and how to present it to ensure ease of use; security and confidentiality; and the professionalism and utility of the information provided.

Security

Since the Internet and its tools adhere to open and documented standards and specifications, it is inherently an unsecured network that has no built-in security controls. Confidential and sensitive information must not reside on Internet servers or systems, or be included in electronic communication available for public access unless proper, formalized security precautions have been established to protect privacy.

On sites that require log on IDs and passwords, strict adherence to established procedures is mandatory. A few key points to remember:

- do not relay log on ID and/or passwords via E-mail;
- do not distribute your ID and/or password to anyone;
- if you must write down your ID and/or password, make sure to protect the information by securing it in an appropriate location.

Keep in mind a password protected site does not mean the site is completely protected. There still exists a possibility, however slight, that the information could be compromised. Ask yourself: If the site is compromised, could there be any harm or damage.

Roles and Responsibilities

Each organization within the OCIO is required to adhere to established records management policies. They are also expected to comply with CIO and DOE standards and guidelines for information posted on the CIO Internet servers. Further clarification follows:

Web manager/master: has primary responsibility for the management of the CIO server(s), as well as the content on the main CIO Home page; also serves as liaison for the organization. Currently, the Web manager is Suzanne Nawrot. The CIO Home page also maintains a Web master email address (e.g. CIO.Webmaster@hq.doe.gov). Suggestions and inquiries about the site or questions regarding operation of the server may be directed to either Ms. Nawrot or the CIO Web master mail box. Division offices should also designate a person responsible for responding to comments/suggestions and/or inquiries. Prior to beginning any web development project, please contact Ms. Nawrot so that a clear understanding of requirements, limitations, and any other issues is established.

Content Owners: CIO program office personnel responsible for the content of material on the CIO Internet server. Content owners are responsible for verifying documents do not contain spelling and/or grammar errors, that the information, as well as hypertext links, is current and correct, and appropriate management approval has been received.

Technical Support: personnel trained in Web design & layout, HTML and other computer language programming, graphic development, and other technical aspects of Home Page creation. These support personnel may also be designee for posting documents to the CIO server. With this duty comes a responsibility to protect their user logon ID and passwords to guard against unauthorized access to the CIO servers and to notify the CIO web manager should access no longer be required.

Server Administrators: responsible for the day-to-day operation and security of the servers; work in partnership with the Web manager/master to manage access, configuration, and possible hosting opportunities.

Determining WHAT to publish on the Web

Ask yourself these questions when reviewing materials proposed for posting on a web server:

Is this item appropriate for public posting? Is it of value to the stakeholders?

The fact that an item would be provided in response to a FOIA request does not mean that it is appropriate for posting on a public forum such as a web site, where it is very readily available to persons from all over the world. There should be some legitimate business reason for making it available on your web site beyond wanting to showcase your products.

Is this item current?

While there are some reports and studies of long-term significance, you need to be very careful to avoid posting documents which no longer have any usefulness, or which contain obsolete references. In the latter case, you will need to decide whether to make corrections, or refrain from posting the document.

Effective customer service and the credibility of the CIO's public-access Internet sites depends on providing information that is up-to-date. Information, particularly time-sensitive information such as job announcements, press

releases, meeting/conference announcements, and/or training, must be posted promptly. Out-of-date information must be removed or updated promptly. Review the information on your web site on a regular basis to ensure currency.

Is the information accurate?

Complete accuracy for all on-line information is an important goal. This is true for both the content of the document and construction (HTML syntax) of the document. It is vital that the posted information be current and correct, and that the presentation of the information avoids errors that would compromise meaning (e.g., missing text, misaligned table cells, etc.). Note that HTML does not precisely mimic the printed page. The formatting adjustments required to present information as HTML pages are not considered to compromise accuracy if they faithfully convey the information in a document. If consistent page appearance is critical, the information should be provided in Adobe Acrobat Final-form Portable Document Format (PDF).

Does it contain inappropriate jargon?

AVOID GOVERNMENT JARGON, ACRONYMS AND ABBREVIATIONS! Use only terms that your intended audience will understand. Items intended for the general public should avoid jargon altogether. Items intended only for specialized audiences may use some technical terms which are readily understood by that audience. Acronyms and abbreviations should not be used until the words are first spelled out fully in the article/document. Even then, the acronym or abbreviation should be expanded in the HTML code using the <ACRONYM> </ACRONYM> or <ABBR> </ABBR> attributes.

Does it represent the agency well?

All documents on the web site should be professional in appearance, and well written. There should be NO grammatical, spelling, or punctuation errors and should reflect the current administrations policy views. Only appropriate OCIO and/or DOE business-related information should be published on the web. The information published should establish a clear understanding of the DOE mission.

Determining HOW to Publish to the Web

Now that you've determined what to put on the web site, you need to determine how. An organizations' web site is judged not only on the information it contains but also on how that information is presented. Make sure your links follow a logical flow and your customers can get to what they need. Consider the human factors associated with information retrieval and processing. Some key considerations are outlined below. Appendix 1 provides a checklist for web page development.

Identify the organization: Through the power of links, a visitor can enter the CIO site at any page. Be sure every topic page identifies your organization and the parent organizations. Further guidance is available in the Section titled “Style Guidance Specific to CIO Web Sites”.

Make it easy to communicate: Include forms and electronic mail links for visitors to use. Forms may be used to solicit information from visitors, for on-line registration for events, or for subscribing to a newsletter, listserv, or bulletin board. Email message forms should be available for visitors to contact your organization’s point of contact who can help them with problems or questions about particular pages or documents or direct them to that help.

Use templates: Menus and document pages in your site should have a consistent look and feel. Templates that standardize fonts, footers, icons, and background colors give them a recognizable structure. Visual consistency enhances the appearance of your site and signals your sites’ professionalism and commitment to WWW users.

Show ownership: Display ownership of the document with a “Point of Contact” name and address, be it a person or a team. Users should not be left “hanging” if they’ve retrieved your information and have questions that cannot be answered. If anonymity is desired, Home pages on the CIO web site may utilize the CIO Web master mail box for visitors to send questions. The CIO Web master will then forward the incoming request to the appropriate office.

Use graphics judiciously: Graphics are attractive, but can be overused. Too many or too large graphics slow down the communications process and frustrate users. Studies have shown that visitors to web sites will only wait 8 seconds for the page to download before moving on. You want to make sure to include only those graphics that add information value to your site, and be sure all images are labeled with descriptive “ALT” tags.

Give help: Use indexes, tables of contents, and search tools to help orient users and guide them to the information they want.

Include useful links: Links are what make the Web a web. Link to useful resources both within your own site, within the CIO site, and on other sites. A few briefly described, well chosen links are often more valuable to users than long lists of links of unknown value. They should be intuitive and not overly general. “Click here” doesn’t present a clear picture of the link target - as in “more information about the CIO Council”. You don’t want visitors trying to guess where they need to go to find information. If figuring out how to navigate your site is like doing a puzzle, you won’t have many return visitors.

NOTE: As a general rule, linking to non-government addresses is not done. The exceptions to this rule are usually DOE/CIO sponsored sites or educational sites. It is important to avoid giving the impression that DOE (or the CIO) is endorsing a commercial product or linking to questionable or objectionable sites.

Avoid dead ends: Use navigation aids freely. Don't let your visitors get stuck in dead ends with no way to navigate around. Provide "top-of-page", "return-to-home", "next page", "previous page", and similar text commands or buttons. Don't rely solely on browser functions.

Offer low-tech options: Not every user has leading edge computing technology to take advantage of a graphical interface. Be sure your site is usable by text-only browsers and by people who can't take advantage of advance features, like forms. Remember, the higher the tech, the lower the number of potential users. ***Just because you can, doesn't mean you should.***

Consider multiple Browsers: Not every user chooses the same browser, or has the latest and greatest version, so your information can look different on different desktops. The user may have a different screen resolution, different browser preferences, or simply a different window size. Colors, the placement of graphics, and other elements may look different. Design your site to split the difference.

Don't clutter your pages with a statement saying, "This site is designed for such-and-such a browser, such-and-such a screen resolution, etc. etc." Few people will read it and fewer still will then open a different browser and change their screen resolution.

NOTE: The Americans with Disabilities Act requires Government web sites be accessible to persons with disabilities. Consider how your site will translate using a screen reader. If you incorporate video and/or audio you must include detailed captions. See http://cio.doe.gov/section_508/ for more information.

Determining the Correct Format

Hypertext Markup Language (HTML): Use HTML for pages that will read in a WWW browser such as Mosaic, Netscape Navigator, or Microsoft Internet Explorer. These pages contain many formatting elements, and can include such things as images, tables, and links to other documents. They do NOT, however, look identical to the printed copy. HTML tells the browser *approximately* how the document should look, but the final appearance of the document is dependent upon the capabilities of the user's computer, monitor, and the settings of the browser being used - both default settings and user specified settings.

HTML pages are text (ASCII) pages to which “tags” have been added to tell the HTML browser how to format the text. For example, the sentence:

This is bold and this is <i>italic</i> type.

would look like this when read in a HTML browser:

This is **bold** and this is *italic* type.

HTML documents may be produced in a variety of ways. Current versions of all major word processing programs can produce HTML pages directly, and some can convert documents created by older versions of that word processing software into HTML. However, care needs to be taken to insure that conversion from a word processing document to HTML hasn’t “redesigned” the layout of the document to change its meaning. There are also a number of editors available to work directly with the HTML pages.

Word Processing Documents: Word or Word Perfect documents should be used, instead of HTML, for distributing documents that will be modified by our customers for their own purpose, or imported into an electronic format appropriate for redistribution within their organization. The current standard at DOE for word processing software is WordPerfect. However, Word is also used. There are a variety of versions of these programs being used in government and business today. While newer versions can import documents produced using an earlier version, the opposite is not true. Therefore, unless you KNOW what version of software your limited audience is using, save your document in an earlier version before posting it on the Internet.

Portable Document Format (PDF): PDF format is known as “final-form portable document format”, which also is a good description of its purpose. PDF documents are intended for electronic distribution for reading on the screen or printing, but NOT for user modification. The user installs a free “PDF reader” program (usually Adobe), which is available for all major computer types (Windows, Macintosh, and several versions of Unix). The documents look identical to the printed version, regardless of the type of system being used.

Government agencies at all levels are the major producers of PDF documents which makes it an ideal format for the distribution of government documents. However, earlier versions of PDF documents are a graphic representation of text, and therefore are incompatible with text readers used by persons with visual disabilities. Adobe Acrobat version 5.0 allows the creation of accessible documents. Alternatives should be provided.

Most government PDF documents are produced using Adobe Acrobat. Acrobat has become tightly integrated with the major WWW browsers, so that when you choose an Acrobat document from a HTML page, Acrobat is automatically loaded to read this document.

When providing documents in PDF, remember to include a link to the Adobe web site for downloading the latest version of their free reader software. Suggested verbiage for that link is:

PDF files require Adobe Acrobat Reader which can be obtained from the Official Adobe Home Page(hypertext link to the home page) at no charge.

Effective Structuring of Web Pages

The purpose of a Web page is to convey information, regardless of the manner the information is being accessed. Structuring pages effectively is the most important consideration in their development. All of the accepted standards of effective written communication also apply to Web pages, as well as newly established accessibility guidelines. Conversely, the purpose of Web pages is NOT to demonstrate how many different HTML structuring tags you can use, or how many different icons you can put on a single page.

Web pages should be conversational in tone, and concise. Information should be presented from the customers' point of view. Avoid government terminology, acronyms, and references to particular program titles, unless (1) you have explained them adequately, or (2) the limited audience for that page can be expected to be fully familiar with these terms.

When used properly, certain HTML page features - particularly hypertext links - can greatly enhance the communication of information through this medium. An effective Web page is NOT just a translation of a paper document into an HTML page.

When creating Web pages, concentrate on creating short pages and think three dimensionally. For those with adequate vision, Web pages are not read linearly. Hypertext links allow visitors to rapidly access the information that they need. A hypertext link to an explanation of a term allows the person who is not already familiar with the term to learn more about it, while the person who is familiar with it can move on without being slowed down by excess verbiage. (Accessibility issues are addressed on page 20 .)

People are unlikely to read long involved sentences or paragraphs on a Web page. Simplify! Moving on to someplace more interesting takes only a mouse click, so give them the information they need up-front, because they won't stick around to find it.

Elements such as colorful icons and backgrounds can make a page more attractive and interesting to a visitor with normal vision, but can cause frustration to someone with impaired vision or color blindness. Exercise restraint. Make sure there is sufficient contrast between background and text.

Hit Counters

Monitoring and analyzing your Web site's traffic is important. Analyzing server logs provides a wealth of information about who's visiting. Analyzing "hits" is a crude and imprecise measurement, it doesn't give a true picture of who is coming and how they are using your site. It could be considered a piece of visual clutter that serves no purpose.

"Under Construction" Signs

Web surfers have short attention spans, and very few have the slightest interest in anything that's "coming soon." The number of Web surfers who have ever returned to a link where they found a "coming soon" blurb is relatively small. It's perfectly acceptable to mention upcoming site features in body copy, but not to have a link to a section that doesn't yet exist.

Also note that some search engines will refuse to list sites that contain "under construction" links.

Present a Unified Picture

It is important that the OCIO's collective WWW pages offer each user full access to the entire expanse of the distributed collection, regardless of the point at which the user enters the site. Reaching the goal of providing the convenience of "one-stop shopping" in a widely distributed system will require that each document collection sponsored by the OCIO, in addition to serving its own particular constituency, provides links to other collections in the OCIO.

OCIO organizational home pages should provide links to other CIO on-line services. As appropriate, this may be accomplished through a single link to the CIO home page, or to major CIO organizational home pages. Lower-level links between specifically related programs in other organizations may sometimes also be appropriate.

DOE WEB POLICY

The following guidelines apply to all DOE-sponsored web sites.

Privacy & Security Notice

On April 7, 2000, the Deputy Secretary sent a memo to the Heads of Departmental Elements relaying specific guidance regarding security notices for Departmental web sites. It is important that members of the public understand that DOE web sites are Federal computer systems which are subject to monitoring and are protected by law. The memo provided the required text for the notice that advises visitors that unauthorized attempts to circumvent security features is unlawful and subject to prosecution.

The privacy statement assures visitors that we collect no personal data, unless they choose to provide that information. Any information collected is anonymous and used only by DOE to improve performance of the web site.

The complete text of the Privacy & Security disclaimer is available in Appendix 3.

Cookies

In June of 2000, the Office of Management and Budget (OMB) issued a memo outlining a policy on cookies on Federal government web sites.

There are two types of cookies:

- session cookies which expire when the user closes the browser at the end of an on-line session,
- persistent cookies which are stored on a user's computer and which expire after a specific time period.

OMB's policy specifically prohibits persistent cookies unless agencies meet the following criteria:

- demonstrate a compelling need to collect the information
- gain the approval of the agency's top official
- have appropriate safeguards for protecting the stored data
- notify visitors to the site that persistent cookies are used.

Agencies can use session cookies without notifying users in the Web site's posted privacy policy.

Credits/Endorsements

As a government agency, DOE needs to be careful not to give the impression of endorsement of any company or business over another. Therefore, links (text or graphic) to organizations outside DOE should be limited to organizations that are DOE sponsored or supported or educational in nature.

Restricted Types of Information

Certain types of information should be considered restricted and should be reviewed and cleared either by OCIO management, General Counsel, or both, prior to publication on any OCIO web site.

They are:

- data protected under the Privacy Act
- data defined as protected, proprietary, confidential, or business sensitive
- information that if compromised could damage National Security
- information that is patentable or contained in patent applications

Appropriate Use of the Official DOE Seal

The DOE Seal should be used to represent the Department appropriately. Use of the DOE Seal should not be used to endorse any idea, company or project not specifically sponsored or supported by DOE. The DOE Seal is meant to represent the Department and can be used in presentations or documents where Departmental involvement has occurred but should not be used in “proposals” TO the Department. The seal can be used on web sites to establish that the site is a DOE web site or a site sponsored and/or supported by DOE. Additional information and graphics are available at <http://visualmedia.hr.doe.gov/>.

Style Guidance Specific to CIO Web Sites

Background Colors and Designs

The current CIO Home page does not utilize background colors or designs. The background color is white so as not to distract from the page content, delay downloading or interfere with the user's ability to read the text. It is also recommended you not change the link colors as the visitors are familiar with their default colors designating certain types of links, and with some systems text that is not black will not print properly.

It is preferred that you refrain from using background designs, but if you do, the design should be extremely subtle. Effective use of backgrounds tie a set of Web pages together, with the same background being used for each page in the set.

Titles

```
<html>
<head>
<title> FY2000 CIO Strategic
Plan</title>
</head>

<body>
```

The title is generally displayed in the title bar of the browser. If a user elects to save the address for future use, the title identifies the page in that user's favorites list or bookmarks.

Every page MUST have a title. The title should be short, but fully informative and specific (e.g., "FY2000 CIO Strategic Plan" instead of "Strategic Plan"). The information in the title will be used by various Internet search engines to index your pages. Additional words can be provided to these search engines by using the keywords tag described below.

Keywords

Additional finding terms for use by Internet search engines can be added to the heading area of your WWW pages using the meta keywords tag as shown.

The commas are ignored by the indexing engine, but can be used for clarity when producing the list.

```
<html>
<head>
<meta name="keywords" content="CIO, DOE,
Information Management, Information
Technology, IM, IT, Architecture, Cyber
Security, John G. Anyman">
<title> Department of Energy Chief Information
Officer</title>
</head>

<body>
```

Description

```
<html>
<head>
<meta name="description"
content="Information, including a registration
form, for the CIO sponsored Records
Management Conference, which will be held
June 23 through 26 in Atlantic City, New
Jersey">
<title> Records Management Conference</title>
</head>

<body>
```

Some Internet indexing programs pick up the first 250 or so words on a WWW page and use these as a description of the page. This is often quite incomprehensible. Using the meta tag, you can add a description to the header area of the page that will be used by these programs as the page description.

A description is appropriate on home pages, but is not necessary or appropriate on every page.

Header

Graphic headers have been developed and are available for use by all CIO organizations. These headers incorporate the privacy and security information requirement distributed by the CIO on April 7, 2000, as well as the CIO logo. Examples of the different designs available can be found at:

http://ciodev.doe.gov/CIO_Logo/logos.htm

Opening

Each WWW page should have a heading near the top of the first screen that clearly identifies the theme of the page (this is in addition to the OCIO header identifying organizational relationship). Like the title, the heading should be short, but fully informative and specific. Lower-level headings may be used if appropriate to the document.

Body

Paragraphs within the body of a document should be clear and concise. Make your paragraphs short, and use HTML lists in lieu of run-together listings with the text.

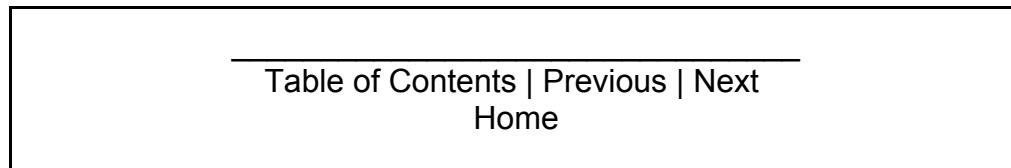
Where the audience has a mixed knowledge of the subject you are addressing, it is often desirable to hyperlink explanatory verbiage, to a glossary, footnotes, and external documents to provide additional information to less informed and more curious readers. Other effective uses of hyperlinks include graphics, tables, surveys, and indexes.

Care should be taken to separate and emphasize content within a page. Horizontal rules can be used to separate themes within a page. However, the overuse of italics and bold can make text difficult to read.

By using Style Sheets to layout the page design, instead of HTML elements, HTML authors will have more control over their pages and make those pages more accessible. Sharing the style sheets, will often shorten page download times for all users. Additional information on style sheets can be found at <http://www.w3.org/Style/CSS/>.

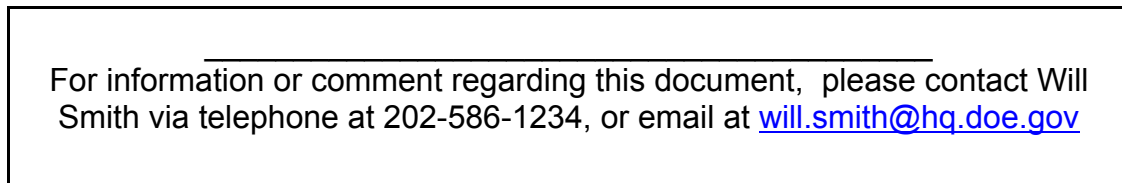
Standard Footers

All home pages and other HTML pages, must have footers that are separated from the body (usually by a horizontal rule) and contain navigational links that allow the user to move logically through the document and document collections. For example, for a document that is arranged like a book, the end of page links are to the table of contents, to the next chapter, to the previous chapter, and to the home page. These links may be tied to icons or mapped graphics, or simply text.



Footer for documents/document collections

A contact email address should appear at the bottom of the home page for a document or collection of documents. This footer can also contain the Organization's name, a mailing address, an email address, and fax and telephone numbers but they should be consistent throughout the document.



Document/document collection identifying footer

Standard footers for all HTML pages on CIO web sites should include text navigation that allow visitors to return to the point they started browsing, as well

as to the CIO and the DOE home pages. Including a site index will also speed navigation through the site.

Provide visitors an avenue to provide comments, ask questions, and give feedback by including a link to email their comments. The CIO Web master email can be utilized, or you can provide the name and email address for someone in the same organization.

Site Index | CIO Home | DOE Home | Disclaimer
Comments or Questions regarding this site can be sent to the [Webmaster](#)

Standard footer for CIO web sites

Flagging Items with “New” or “Hot”

Sometimes it is appropriate to highlight or “flag” an item on the Home page. A “New” icon can be used to identify new or revised items. The icons should also be removed after a preset interval, such as two weeks. A “Hot” icon is of particular value to the first time visitor who wants to rapidly identify the highlights of the CIO web site offerings. But use this icon sparingly. It may be more appropriate to create a listing of “Hot” items on a separate page.

Hypertext Link Maintenance

Dead links inevitably occur as pages are modified, moved, or deleted. However, dead links can quickly damage a WWW site’s credibility. Content owners are responsible for monitoring and maintaining their collections. They should have dead links corrected or removed as soon as possible.

When changing URLs on CIO servers, coordination may be required with external servers which point to those URLs. When moving a WWW page to a new URL leave a “note” providing directions to the new location, as well as a hypertext link. (See below)

Welcome! The CIO Quality Awards Home page has been moved to <http://cio.doe.gov/Qawards/> Please make note in your bookmarks and/or favorites listings.

Restricted Access

Documents and collections that are not for public distribution (i.e., not yet published, internal working documents, sensitive information, etc.) should not be linked to publicly accessible documents or listed in publicly available indexes. Even password protecting a site is no guarantee the information is safe.

Document Organization and Formats

Large Documents

Documents (greater than five screens) presented as Web pages should be organized into sections or chapters and linked together. If the material is meant primarily to be read sequentially, then a Table of Contents and division by chapter may be most appropriate. If the material is meant to be picked through, then a division by sections with key word links to appropriate sections may be best. Content should be arranged from the customer's point of view.

To assist users in navigating sectioned documents, each page should include a navigation mechanism that allows the user to logically progress through the document (next chapter, previous chapter, etc.).

If you believe that the visitor is going to need to download the file for local use, such as to rewrite the document as an agency policy document, provide it for downloading as a word processing document.

Documents that visitors will want to download for continued reference, further electronic distribution or local printing, but will NOT need to modify, should be made available as Adobe Acrobat PDF files (version 5.0 assists in Section 508 compliance, otherwise you should provide documents in another format, for persons with physical disabilities).

Multimedia

At the current state of the technology, true multimedia - recorded sound or video files - may not be appropriate for CIO Internet pages. Multimedia files are large and take a long time to transmit at the slow connection speeds used by many visitors. In addition, many visitors may not have the software or hardware necessary to play them on their systems. Ask yourself whether or not multimedia provides added value prior to undertaking the provision of incorporating it in the Web site.

Use of Relative Uniform Resource Locators (URLs)

Within a server, use relative URLs for both anchors, images, and other documents in order to make documents and collections portable. This will permit you to test your pages by maintaining them in directories on the development server which have the same names and structure as the directories on the production server. URLs that reference other servers should always be fully stated (absolute).

Relative URLs start with the current directory and show the path to the new directory and the name of the file in that directory. Relative URLs do NOT start with a slash. Two dots (“..”) means to go up one directory in the directory tree. As needed, you use dots to go up the proper number of directories to get to the directory which is above both your common directory and the new one. Then add the path down to the needed file. For example:

```
<A HREF="../../documents/stratplan.htm">FY 2000 Strategic Plan</A>
```

Sub-directories are indicated by adding the directory name and a slash to the beginning of the file name. Such as:

```
<A HREF="documents/IMPlan.html">Information Management Plan</A>
```

URLs can be used to go directly to a particular location within an HTML document. First, you put a name anchor at that location such as the following:

```
<a name="glossary"></a>
```

Then you end your URL with a “#” and that name, such as:

```
<A HREF="stratplan.htm#glossary">Glossary</A>
```

All links to images, PDF, or other files the user might expect to be large, should be followed by an indication of the size of that file in parenthesis or brackets, i.e. (315 KB). Even if the file is small, you may want to provide the size as the user may be reluctant to select it in order to avoid a file that is large and may take too long to download.

Images

The appropriate use of images will help convey information or create a consistent and recognizable “look and feel” for a collection, as well as to convey meaningful information that is not easily conveyed by words. This is called “branding”.

When using images:

Make images files as small as possible.

- Use thumbnail images or text to link to pages with large images.
- Reduce the number of colors. Color images will seldom need more than 256 colors, and will sometimes be adequate with 16 colors. Black and white images should be saved as 2 color image files.
- Use an appropriate image format. Generally, image files of 256 colors or more will be smaller as JPEG images, while black and white images are better as GIF images (also, GIF is required if you want to use a transparent image).
- Images should be no wider than the viewing window on a 800 by 600 monitor.

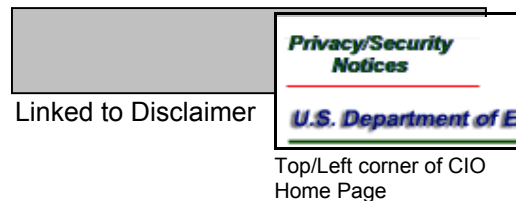
Within each image link:

- Provide a brief textual alternative description `<ALT=“put your description here”>` for each image for use by text-only browsers, and those browsers that display this description while the image is being loaded. If the image is for visual effect only and does not convey information, the use of a space in the ALT= “ ” element will turn that image off altogether for text only browsers .
- Specify the dimensions (width and height) of each image. This will speed up the document formatting on many browsers. If a browser knows how much “space” to reserve for the image, it will continue placing the page text while the image downloads, rather than wait for the image to be completely loaded before building the rest of the page.

Image Maps

An image map is an image that has “active regions”. When a user selects one of the regions, an action takes place - usually a link is followed. Therefore, each region should have a description attached to the AREA element that makes it clear to the user what action will happen. Client-side image maps should be used, as they present the best accessibility.

The image map on the CIO Home page that provides a link to the disclaimer is a good example.



Further Considerations

Incorporating Copyrighted Works into Internet Documents

Copyright is a property right whereby authors obtain, for a limited time, certain exclusive rights to their works.

The Internet contains a mix of works protected by copyright and works in the public domain. Copyrighted items can be text or graphics. Thus, extreme caution should be exercised in using digital material downloaded from the Internet. Access to these works on the Internet does not automatically mean that these works can be reproduced and reused without permission or royalty.

If there is a possibility that an Internet product will become part of a commercial product in the future or become widely disseminated, then permissions should be sought before publication of the product.

If information can be viewed on the Internet, it can be copied. Anyone posting information on a Web site is responsible for ensuring that appropriate legal clearance and permission are obtained before using someone else’s work on the Internet.

If content on a Web site or within a document is copyrighted material:

- get written authorization from the copyright owner to post the information
- display of a standard copyright notice is required
- the copyright owner is solely responsible for policing how their copyrighted material is used.

If any alterations are made to copyrighted material, care should be taken to explain the specific changes. Proper credit should be given for all copyright material. When in doubt, credit should be given as if the material were copyrighted.

Please note, content developed for Departmental Web sites is the property of DOE and the U.S. Government. Web developers can not copyright Web sites or any portion of the web site.

Accessible HTML Documents

The following Web page accessibility recommendations are based on guidelines that have been provided by the World Wide Web Consortium to help federal agencies provide information over the WWW that can be accessed by the broadest possible constituency. These recommendations apply to computer access and do not address concerns regarding mobile access.

Basic Requirements

- The special screen readers used by person with visual disabilities work adequately with HTML, ASCII, or WordPerfect files. Many do **not**, however, work properly with documents created using versions of Adobe Acrobat PDF prior to 5.0. It is recommended that any document published in earlier version PDF format should also be posted in an accessible format such as HTML, ASCII, or WordPerfect.

For more information on Adobe Acrobat 5.0 and creating accessible PDF files, see <http://access.adobe.com>.

- Every graphic image must have associated text as an ALT= element. Make sure they are appropriately descriptive. For simple images, such as icons performing the function of bullets, use simple ALT attributes (e.g., “*” or “-”). This applies to all images, including

those used for decorative purposes only. In the reader programs used by persons with visual disabilities, the [IMAGE] appears at the location of every image without an alternative text statement.

Be very careful in constructing hypertext links to make sure that a person who cannot see the image can understand that it is a link, and what the link is. This can be presented as either alternative text in the image link, or as associated text. Probably the greatest problem faced by persons with visual disabilities using web pages is identifying links which are presented by an icon only.

- Provide keyboard shortcuts to important links (including those on client-side image maps), form controls, and groups of form controls to allow navigation through the site for users unable to use a mouse or pointing device. NOTE: The key used to activate shortcuts may be handled differently by different operating systems. On Windows machines, the “alt” and “ctrl” keys are most commonly used while on a Macintosh, it is the apple or “clover leaf” key.

The important thing to remember when developing web sites is that consistent page layout, recognizable graphics and clear, concise language benefit all users.

Additional Information:

Dave Raggett's Introduction to HTML

[<http://www.w3.org/MarkUp/Guide/Overview.html>]

Amateur Web Sites - the Top Ten Signs

[http://www.webdevelopersjournal.com/columns/abc_mistakes.html]

Learning Cascading Style Sheets

[<http://www.w3.org/Style/CSS/index.html>]

Designing More Usable Web Sites, Trace R&D Center, University of Wisconsin - Madison.

[<http://trace.wisc.edu/world/web/>]

Section 508 of the Rehabilitation Act, Office of the CIO

[http://cio.doe.gov/section_508/index.html]

Web Content Accessibility Guidelines, W3C Recommendations
[<http://www.w3.org/tr/WAI-WEBCONTENT/>]

W3 Techniques for Web Content Accessibility Guidelines,
[<http://www.w3.org/tr/WAI-WEBCONTENT-TECHS/>]

Writing Accessible HTML Documents, Paul Fontaine, GSA Center for
Information Technology Accommodation.
[<http://www.gsa.gov/coca/WWWcode.htm>]

Appendix 1

Web Page Quality Assessment Checklist

Standard CIO Header graphic (or equivalent) is included	
CIO/DOE logos are used where appropriate to establish/maintain identity	
Home Page and all other pages use standard footer which includes links to parent organization(s) as well as Web master contact information (specific or generic)	
Icons, buttons, or graphic representations have same meaning on all pages	
Graphics are used effectively and do not cause download delays	
Use of common colors is consistent through all pages. (Background, text, buttons, links, icons...)	
Image maps are clearly presented with logical layout of functions and include ALT tags	
Graphics support surrounding content and convey a complimentary message	
Graphics files used with pages are kept to minimal size as a matter of performance	
Icons, buttons, or graphic representations standardized across all pages	
Thumbnail images are used to link to large images and file sizes are noted	
The dimensions (width and height) of each image are specified	
ALT tags are included with all graphics for site viewing by text-only browsers	
All pages have browser window Titles. (Titles are used by browsers if URL for page is saved/bookmarked)	
Page and document content relates to the Organization's mission and function	
Purpose for the page is either stated or easily perceived	
Page and document information is accurate	
Document syntax is correct	
Large documents are logically divided	
A Table of Contents is provided for large documents	
Content is arranged from the customers' point of view	
Sub-headings are provided with long single page documents or lists	
The reader does not have to dig deep to find what they are after	

Spelling and grammar are correct within page(s) and document(s)	
Information is current and verifiable	
Document format complies with Organizational standards	
External links support the purpose of a page or document	
Subject/topics are simple and intuitive	
Non-Java/Javascript navigation options are provided	
Document collections include a standard identifying footer which includes contact information for content (email, telephone number, etc) as well as Web master contact information (specific or generic)	
Each page in a collection is linked to the collections Home Page	
Each page in the collection is linked to allow forward/backward browsing	
Each Home page links back to the sponsoring Home page	
Links are checked periodically to avoid "dead links".	
The title and top level heading are the same	
Paragraphs are clear and concise	
Horizontal rules are used to separate dissimilar paragraphs	
Text highlighting (bold, italics, underline) are used sparingly	
Footers are separated from the body by a horizontal rule or equivalent	
Every page has been tested with multiple browsers (Mosaic, Netscape, Internet Explorer)	
Current HTML standard is used. Proprietary markup is to be avoided.	
Links are provided to glossaries, indexes, footnotes, external documents and tables	

TEN RULES FOR SUCCESSFUL WEB PAGES

1. Keep the Pages Current

Promptly delete outdated items and quickly post new materials. ***THIS IS THE MOST IMPORTANT RULE FOR MAINTAINING A SUCCESSFUL WEB SITE.***

2. Use Appropriate Formats for Posted Documents

HTML pages look good on the screen, PDF documents look just like the original document, word-processing files are good if the user wants to use and modify the document, and text (ASCII) files work on any computer.

3. Put Your Emphasis on Conveying Information Effectively

Use short, simple sentences. Organize your pages logically. Link to progressively more detailed information to allow the visitor to get just that information needed.

4. Avoid Bleeding-Edge HTML Technology

Your business is to convey information – not show your expertise in the latest and greatest HTML extensions. Make sure that your pages look OK using rudimentary Web browsers. Design for the lowest common denominator. Ask first if it adds value before you add it - just because you can, doesn't mean you should.

5. Use Color and Backgrounds Intelligently

Use subtle background colors and patterns that do not interfere with the text. Do not change link colors – users are familiar with the meanings of the default colors. Make limited use of colored text, and remember that many browsers cannot show colored text except for the links.

6. Avoid <Blink> and Excessive Animation

Animation on a page distracts the reader, particularly peripheral-vision animation (as in marquees that scroll at the bottom of the browser window). Allow the reader to view the page in peace. NEVER use the <blink> element.

7. Avoid long HTML pages

A number of linked short pages is preferable to a single long page. Many users never scroll beyond the first screen. Think three-dimensionally.

8. Keep Download Times Short

Use images sparingly, and keep image sizes small. If a large image is needed to convey certain information, bring visitors into a small page, and link from that page to the larger page, giving fair warning of the size of the larger page.

9. Provide Navigation Support

Make liberal use of standard icons and links to help the visitor navigate within the page and around your site.

10. Encourage User Feedback

Provide email addresses and encourage user feedback through use of the <[mailto:](#)> element and feedback forms.

Appendix 3

The following text is contained on CIO.DOE.GOV and www.energy.gov as the privacy and security disclaimer.

SECURITY NOTICE

This web site is part of a Federal computer system used to accomplish Federal functions. The Department of Energy monitors this web site for security purposes to ensure it remains available to all users and to protect information in the system. By accessing this web site, you are expressly consenting to these monitoring activities.

Unauthorized attempts to defeat or circumvent security features, to use the system for other than intended purposes, to deny service to authorized users, to access, obtain, alter, damage, or destroy information, or otherwise to interfere with the system or its operation is prohibited. Evidence of such acts may be disclosed to law enforcement authorities and result in criminal prosecution under the Computer Fraud and Abuse Act of 1986 and the National Information Infrastructure Protection Act of 1996 (Pub. L. 104-294), (18 U.S.C. 1030), or other applicable criminal laws.

GENERAL DISCLAIMER

This system is made available by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of originators expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

PRIVACY NOTICE

We collect no personal information about you when you visit a DOE Web site, unless otherwise stated, unless you choose to provide this information to us. However, we collect and store certain information automatically. What we collect and store automatically is:

- the Internet Protocol (IP) address of the domain from which you access the Internet (i.e. 123.456.789.012) whether yours individually or provided as a proxy by your Internet Service Provider (ISP)
- the date and time you access our site
- the pages you peruse (recorded by the text and graphics files that compose that page)
- and, the Internet address of the Website from which you linked directly to our site.

We use the summary statistics to help us make our site more useful to visitors, such as assessing what information is of most and least interest to visitors, and for other purposes such as determining the site's technical design specifications and identifying system performance or problem areas.

This information is NOT shared with anyone beyond the support staff to this home page, except when required by Law Enforcement investigation, and is used only as a source of anonymous statistical information.

COMMENTS SENT BY E-MAIL

You may choose to provide us with personal information, as in an e-mail message containing your comments or questions. We use this information to improve our service to you or to respond to your request. There are times when your message is forwarded, as e-mail, to other Department of Energy employees who may be better able to help you. Except for authorized law enforcement investigations, we do not share our e-mail with any other outside organizations.